ABSTRAK

EFEKTIVITAS LARUTAN SARI TOMAT (*Solanum lycopersicum*) DALAM MENURUNKAN KADAR KADMIUM (Cd) PADA DAGING KERANG DARAH (*Anadara granosa*)

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Latar Belakang: Daging kerang darah yang terkontaminasi logam berat Cd dapat terakumulasi dalam tubuh manusia dan menyebabkan keracunan akut serta kronis. Perendaman menggunakan larutan sari tomat dengan variasi waktu dapat menurunkan kadar Cd yang terdapat dalam daging kerang darah.

Metodologi: Penelitian quasi experiment ini menggunakan *The Non Equivalent Pre-Test and Post-Test with Control Group Design.* Populasi penelitian ini adalah kerang darah yang ada di Pasar Tambak Lorok, Semarang. Penelitian ini menggunakan metode perendaman dengan larutan sari tomat berkonsentrasi 50% dengan variasi waktu perendaman 10 menit, 15 menit, 20 menit, 30 menit, dan 60 menit dengan pengulangan sebanyak 4 kali. Uji statistik menggunakan uji *Anova One Way* dilanjutkan uji *Post Hoc* dan *One Sample T-Test*.

Hasil Penelitian: Hasil penelitian menunjukkan efektivitas penurunan kadar Cd yang berbeda pada masing-masing kelompok perlakuan yaitu waktu perendaman 10 menit 9,91%, 15 menit 24,94%, 20 menit 29,47%, 30 menit 31,32%, dan 60 menit 37,50%.

Kesimpulan: Perendaman selama 60 menit paling efektif dalam menurunkan kadar Cd dengan efektivitas sebesar 37,50%.

Kata Kunci: Kadar Cd, Larutan Sari Tomat, Waktu Perendaman.

ABSTRACT

EFFECTIVENESS OF SOLVENT TOMATO EXTRACT (*Solanum lycopersicum*) IN REDUCING CADMIUM (Cd) LEVELS IN BLOOD COCKLE MEAT (*Anadara granosa*)

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Background: Blood cockle meat that contaminated with Cd can accumulate in the human body and cause acute and chronic poisoning. Submergence using solvent tomato extract with time variations can reduce the levels of Cd that contained in blood cockle meat.

Methodology: This quasi-experimental research uses The Non-Equivalent Pre-Test and Post-Test with Control Group Design. The population of the research is blood cockle in Tambak Lorok Market, Semarang. This research used a soaking method with 50% concentrated tomato extract and variation of submergence times are 10 minutes, 15 minutes, 20 minutes, 30 minutes, and 60 minutes with 4 time repetitions. Statistical tests using One Way Anova test continued with Post Hoc test and One Sample T-Test.

Result of The Research: The results showed the effectiveness of decreasing levels of Cd were different in each treatment group. In time variation 10 minutes was 9.91%, 15 minutes was 24.94%, 20 minutes was 29.47%, 30 minutes was 31.32%, and 60 minutes was 37.50%.

Conclusion: Soaking for 60 minutes was the most effective in reducing the levels of Cd with 37,50% effectiveness.

Keywords: The Levels of Cd, Tomato Extract, Submergence Times